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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,303	01/23/2002	Eran Peled	3274/Assia	7516

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EXAMINER	
GREY, CHRISTOPHER P	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,303	PELED, ERAN	
	Examiner	Art Unit	
	Christopher P. Grey	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pang et al. (US 20030112758), hereinafter referred to as Pang, in view of Pate et al. (US 5398263), hereinafter referred to as Pate

Claim 1 Pang discloses Encapsulating data packets to include a sequence number in the data packet payload at the transmitter node (paragraph 0109 and 0116, 0098)

Pang discloses TDM equipment (paragraph 0107)..

Pang discloses providing a clock signal. Furthermore, the background of the invention gives a clear indication that a Stratum clock signal may be implemented within a TDM network given there exists a clock (page 2 lines 12-22).

Pang discloses preparing data packets for transmission by a transmitter device dependent on a clock pulse (paragraph 0050 and 0090).

Pang discloses receiving incoming packets from an asynchronous network at the receiving node (paragraph 0105, 0119 and 0121).

Pang discloses detecting a sequence number order of received data packet (paragraph 0099).

Pang discloses compensating the packet rate of received data packets (paragraph 0050).

Pang discloses dividing the frequency rate of the incoming data signal (paragraph 0050)

Pang discloses attenuating the data transmission signal amplitude for reducing jitter and wanders in compliance with stratum 3 accuracy standards (paragraph 0050 and 0053).

Pang does not specifically disclose the case of detecting offsets of non-sequences packets.

Pate discloses using sequence numbers to receive packets within a buffer. Pate also discloses detecting a mis-ordered sequence, and as a result slowing down a clock to compensate for a missing packet (paragraph 0048).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device for detecting sequence numbers as disclosed by Pang, to adjust a clock in the even that packets are mis-ordered as disclosed by Pate. The motivation for this combination is to achieve adaptive timing recovery (paragraph 0048).

Claim 3 Pang discloses inserting a null packet in case of missing data packets (paragraph 0012) and ignoring data packets in the case that their sequential number is out of order (paragraph 0019).

2. Claims 2, 4, 5, 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pang et al. (US 20030112758), hereinafter referred to as Pang, in view of Pate et al. (US 5398263), hereinafter referred to as Pate, in further view of Vanderspool et al. (US 5398263), hereinafter referred to as Vanderspool.

Claim 2, 6 The combined teachings of Pang and Pate do not specifically disclose the jitter being reduced below the value of +-250 microseconds.

Vanderspool discloses a DPLL for aligning a timing offset, where a clock has a maximum offset and when that offset is exceeded, a retard signal is used to decrease the offset below the maximum value (Col 7 lines 31-Col 8 lines 38). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to set a maximum value to 250microseconds, since it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA).*

Claim 4, 8 The combined teachings of Pang and Pate do not specifically disclose the incoming data signal division enlarging the signal wavelength (UP to the minimum frequency time) between two cycles of the signal.

Vanderspool discloses a programmable divider (Col 4 lines 29-67 and Col 13 lines 9-14 and element 721 in fig 7).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Pang and Pate with a programmable divider as disclosed by Vanderspool. Furthermore, it would have been obvious to one of the ordinary skill in the art at the time of the invention that adjusting the division setting

of the programmable divider to achieve a desired result involves only routine skill in the art. *In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA).*

Claim 5 Pang discloses Encapsulating data packets to include a sequence number in the data packet payload at the transmitter node (paragraph 0109 and 0116, 0098)

Pang discloses TDM equipment (paragraph 0107)..

Pang discloses providing a clock signal. Furthermore, the background of the invention gives a clear indication that a Stratum clock signal may be implemented within a TDM network given there exists a clock (page 2 lines 12-22).

Pang discloses preparing data packets for transmission by a transmitter device dependent on a clock pulse (paragraph 0050 and 0090).

Pang discloses receiving incoming packets from an asynchronous network at the receiving node (paragraph 0105, 0119 and 0121).

Pang discloses detecting a sequence number order of received data packet (paragraph 0099).

Pang discloses compensating the packet rate of received data packets (paragraph 0050).

Pang discloses dividing the frequency rate of the incoming data signal (paragraph 0050)

Pang discloses attenuating the data transmission signal amplitude for reducing jitter and wanders in compliance with stratum 3 accuracy standards (paragraph 0050 and 0053).

Pang does not specifically disclose the case of detecting offsets of non-sequenced packets and using an advanced DPLL unit.

Pate discloses using sequence numbers to receive packets within a buffer. Pate also discloses detecting a mis-ordered sequence, and as a result slowing down a clock to compensate for a missing packet (paragraph 0048).

The combined teachings of Pang and Pate do not specifically disclose using a DPLL unit.

Vanderspool discloses a DPLL unit with a frequency divider, and dedicated to apply a retard signal for correction timing (Col 8 lines 15-54).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device for detecting sequence numbers as disclosed by Pang, to adjust a clock in the even that packets are mis-ordered as disclosed by Pate. The motivation for this combination is to achieve adaptive timing recovery (paragraph 0048). Furthermore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to employ the frequency division and compensation as disclosed by Pang within a DPLL unit as disclosed by Vanderspool. The motivation for this modification is to achieve timing correction.

Claim 7 Pang discloses inserting a null packet in case of missing data packets (paragraph 0012) and ignoring data packets in the case that their sequential number is out of order (paragraph 0019).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Zampetti (US 6943609) discloses using a stratum clock state machine to control a multiplexer.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Grey whose telephone number is (571)272-3160. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey
Examiner
Art Unit 2667

CHI PHAM
SUPERVISORY PATENT EXAMIN
TECHNOLOGY CENTER

10/17/05